

# INTRODUCTION

## 1. PURPOSE AND SCOPE

National Weather Service Environmental Manual (NWSM 50-5116) implements the elements of the National Weather Service (NWS) Environmental Compliance Program defined in the National Weather Service Policy Directive 50-51, Environmental Compliance.

This manual was developed in accordance with Environmental Protection Agency (EPA), Department of Commerce, NOAA and other Federal agency's environmental standards (e.g., Department of Transportation (DOT) and Occupational Safety and Health Administration (OSHA)). In the absence of any published standards, guidance was developed to govern unique NWS activities.

These sections are applicable to NWS facilities, operations and personnel (e.g., employees, contractors, visitors) and will be implemented as directed by NWS PD 50-51. When NWS operations are conducted at another organization's site (e.g., Government agency, university) NWS environmental requirements and procedures shall be followed unless the hosting organization's requirements and procedures pre-empt as determined in the lease agreement, Memorandum of Understanding, etc.

## 2. DEFINITIONS

<b>Designated Responsible Official</b>	The Designated Responsible Official (DRO) at every NOAA facility is the senior NOAA official on-site. This official has authority over operations or activities which are subject to environmental statutes. The responsibility of the DROs is inherent in their position and need not be formally designated or ascribed.
<b>Facility Environmental Coordinator</b>	The Facility Environmental Coordinator (FEC) is responsible for ensuring the activities carried out at a facility are conducted in accordance with Federal, state and local environmental regulations.
<b>Memorandum of Understanding (MOU)</b>	A written agreement between two governmental organizations which defines each organization's responsibilities and duties.
<b>Station Manager</b>	The Station Manager shall be either the NWS Regional Director; Directors of Centers under National Centers for Environmental Prediction (NCEP) (Aviation Weather Center, NP6; Storm Prediction Center, NP7; and Tropical Prediction Center, NP8), Directors of the National Data Buoy Center (NDBC), National Weather Service Training Center (NWSTC), and Chiefs of National Reconditioning Center (NRC), Radar Operations Center (ROC); or Meteorologist-in-Charge (MIC), Hydrologist-in-Charge (HIC) or Official-in-Charge (OIC).

### 3. LIST OF ABBREVIATIONS AND ACRONYMS

The abbreviations and acronyms used in this document are as follows:

AA	Assistant Administrator	CPG	Comprehensive Procurement Guidelines
ACM	Asbestos-Containing Material	CPSC	Consumer Product Safety Commission
AHERA	Asbestos Hazard Emergency Response Act	CRT	Cathode Ray Tube
ARI	Air Conditioning and Refrigeration Institute	CWA	Clean Water Act
ASOS	Automated Surface Observation System	CZMA	Coastal Zone Management Act
AUL	Authorized Use List	DAA	Deputy Assistant Administrator
BMP	Best Management Practices	DCP	Data Collection Platform
CAA	Clean Air Act	DDS	Draft Data Set
CDL	Commercial Driver's License	DLA	Defense Logistics Agency
CE	Categorical Exclusion	DOC	Department of Commerce
CERCLA	Comprehensive Environmental Response Compensation Liability Act	DOT	Department of Transportation
CESQG	Conditionally Exempt Small Quantity Generator	DRO	Designated Responsible Official
CFC	Chlorofluorocarbons	EA	Environmental Assessment
CFR	Code of Federal Regulations	EHS	Extremely Hazardous Substance
CHEMTEC	Chemical Manufacturers Transportation Emergency Center	EIS	Environmental Impact Statement
CIH	Certified Industrial Hygienist	EPA	Environmental Protection Agency
CONUS	Continental United States	EPCRA	Emergency Planning and Community Right-to-Know Act
COTR	Contracting Officer's Technical Representative	ERG	Emergency Response Guidebook

ESA	Endangered Species Act	HMTUSA	Hazardous Materials Transportation Uniform Safety Act
ET	Electronic Technician		
FAR	Federal Acquisition Regulations	HS	Hazardous Substance
		HSWA	Hazardous and Solid Waste Amendments
FET	Facility Engineering Technician	HUD	Department of Housing and Urban Development
FEE	Federal Environmental Executive	HVAC	Heating, Ventilation and Air Conditioning Equipment
FIFRA	Federal Insecticide, Fungicide, Rodenticide Act	HW	Hazardous Waste
FONSI	Finding of No Significant Impact	JWOD	Javits-Wagner-O=Day Program
FSS	Federal Supply Service	LARC	Limited Access Remote Collector
GSA	General Services Administration	LBP	Lead- Based Paint
HAP	Hazardous Air Pollutant	LEL	lower explosive limit
HAZCOM	Hazard Communication	LEPC	Local Emergency Planning Committee
HAZMAT	Hazardous Material	LQG	Large Quantity Generator
HAZWOPER	Hazardous Waste Operations and Emergency Response	MAP	Model Accreditation Plan
HC	Hazardous Chemical	MCE	Mercury Containing Equipment
HIC	Hydrologist- In-Charge	MIC	Meteorologist- in- Charge
HM	Hazardous Material	MOU	Memorandum of Understanding
HMR	Hazardous Materials Regulations	MPRSA	Marine Protection, Research and Sanctuaries Act
HMT	Hazardous Materials Table	MS4	Municipal Separate Storm Sewer System
HMTA	Hazardous Materials Transportation Act	MSDS	Material Safety Data Sheet

n.o.s.	not otherwise specified	ORM	Other Regulated Material
NAO	NOAA Administrative Order	OSH Act	Occupational Safety and Health Act
NASA	National Aeronautical and Space Administration	OSHA	Occupational Safety & Health Act or Occupational Safety & Health Administration
NCEP	National Center for Environmental Prediction	P.E.	Professional Engineer
NDBC	National Data Buoy Center	P2	Pollution Prevention
NECSAS	NOAA Environmental Compliance and Safety Assessment System	PACM	Presumed Asbestos Containing Materials
NEPA	National Environmental Policy Act	PCB	Polychlorinated Biphenyl
NESHAP	National Emissions Standards for Hazardous Air Pollutants	pCi/L	Picocuries per liter
NFPA	National Fire Protection Association	PEL	permissible exposure limit
NHPA	National Historic Preservation Act	PfDs	Proof Data Set
NLIC	National Lead Information Clearinghouse	PPA	Pollution Prevention Act
NOAA	National Oceanic and Atmospheric Administration	PPE	personal protective equipment
NOI	Notice of Intent	ppm	parts per million
NPDES	National Pollutant Discharge Elimination System	PRP	Principal Responsible Party
NWS	National Weather Service	PTE	potential to emit
NWSH	National Weather Service Headquarters	PVQ	Pre-Visit Questionnaire
OIC	Official- in- Charge	RAC	Risk Assessment Code
		RACM	Regulated Asbestos Containing Material
		RCRA	Resource Conservation and Recovery Act
		RDA	Radar Data Acquisition

RMAN	Recovered Materials Advisory Notices	TRE	toxicity reduction evaluation
ROC	Radar Operations Center	TSCA	Toxic Substances Control Act
RQ	Reportable Quantity	TSDF	Treatment, Storage or Disposal Facility
SARA	Superfund Amendments and Reauthorization Act	TSI	Thermal System Insulation
SDWA	Safe Drinking Water Act	UEL	upper explosive limit
		UL	Underwriters Laboratories
		UN/NA	United Nations/North American
SERC	State Emergency Response Commission	UST	Underground Storage Tank
SECO	NOAA Safety and Environmental Compliance Office	VOC	Volatile Organic Compounds
SIP	State Implementation Plan	WQA	Water Quality Act
sp.gr.	specific gravity	WSOM	Weather Service Operations Manual
SPCC	Spill Prevention Control and Countermeasures	WSR	Waste Shipment Record
SQG	Small Quantity Generator	XRF	X-ray Spectrophotometer
SFSC	Sterling Field Support Center		
SWDA	Solid Waste Disposal Act		
TCLP	Toxicity Characteristic Leaching Procedure		
TPQ	Threshold Planning Quantity		

#### 4. Glossary

Accumulation - the storage of hazardous waste by the generator without a permit if certain requirements for volume and time limits are met.

Acquisition - the acquiring by contract with appropriated funds for supplies or services (including construction) by and for the use of the Federal Government through purchase or lease.

Bulk Packaging - a packaging, other than a vessel or barge, including a transport vehicle or freight container in which hazardous materials are loaded with no intermediate form of containment and which has a maximum capacity greater than 450 L (119-gal.) as a receptacle for a liquid; a maximum net mass greater than 400 kg (882-pounds) and a maximum capacity greater than 450 L (119-gal.) as a receptacle for a solid; or a water capacity greater than 454 kg (1,000 lbs.) as a receptacle for a gas.

Categorical Exclusion (CE) - an action which the agency has determined will not have any significant environmental effect and hence will not require application of the NEPA process.

Characteristic Waste - a hazardous waste that meets one of the characteristics of a hazardous waste in Subpart C of 40 CFR Part 261. These wastes are ignitable, corrosive, reactive or toxic and are identified with the alphabetical letter "D".

Comprehensive Procurement Guidelines (CPG) - the mechanism through which EPA designates items as containing recycled content, for purchase by Federal, State and local agencies or by government contractors using appropriated Federal funds.

Conditionally-Exempt Small Quantity Generator (CESQG) - produces less than 100 kilograms (220-pounds) of hazardous waste and no more than 1 kilogram (2.2 pounds) of acute hazardous waste per month.

Contiguous Zone - the zone established by the United States under article 24 of the Convention of the Territorial Sea and Contiguous Zone, that is contiguous to the territorial sea and that extends nine miles seaward from the outer limit of the territorial area.

Department of Transportation (DOT) - governmental agency responsible for the transportation of materials via roads, air and sea.

Designated Person - an NWS employee designated by the Facility Manager to coordinate the compliance efforts for a specific environmental program.

Designated Responsible Official (DRO) - the senior NWS official on-site. This official has authority over operations or activities which are subject to environmental statutes. The DRO could be the MIC, OIC or HIC. The Designated Responsible Official (DRO) at every NOAA facility is the senior NOAA official on-site. This official has authority over operations or activities which are subject to environmental statutes. The responsibility of the DROs is inherent in their position and need not be formally designated or ascribed. For the NWS, the DRO could be: the Assistant Administrator (AA), the Deputy Assistant Administration (DAA), the Regional/Center/Office Director, the Meteorologist-in-Charge (MIC), Hydrologist-in-Charge (HIC) or Official-in-Charge (OIC).

Electronic Waste - discarded computers, cathode ray tubes (CRTs), cell phones, fax machines, electronic instrumentation.

Emergency Coordinator - The person in charge of the NWS site during an emergency. This may be the Designated Official or someone appointed by the Designated Official to fulfill the functions of this position.

Environmental Protection Agency (EPA) - governmental agency responsible for the protection of our nation's environmental resources.

Environmentally Preferable - products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services.

EPA ID Number - a unique number assigned by the EPA or authorized State to each generator, transporter and treatment, storage or disposal facility.

Extremely Hazardous Substance (EHS) - any material listed in 40 CFR 355.

Facility Environmental Coordinator - a NOAA employee who is responsible for ensuring activities carried out at a facility are conducted in accordance with Federal, State and local environmental regulations. In the NWS, the FEC is typically referred to as the "Environmental Focal Point."

Field Office - a Field Office may include the following: Weather Forecast Office (WFO), River Forecast Center (RFC), Weather Service Office (WSO), and a Data Collection Office (DCO).

Finding of No Significant Impact (FONSI) - the determination that a proposed action will not adversely impact the environment.

Flashpoint - the minimum temperature at which a liquid gives off vapor within a test vessel in sufficient concentration to form an ignitable mixture with air near the surface of the liquid.

Generator - any person (i.e. an individual, trust, firm, joint stock company, Federal Agency, corporation, partnership, association, State, municipality, commission, political subdivision of a State or any interstate body) by site, whose act or process produces hazardous waste identified or listed in 40 CFR Part 261 or whose act first causes a hazardous waste to become subject to regulation, and "Generator" produces 1,000 kilograms (2,200-pounds) per month of hazardous waste or 1 kg of acutely hazardous waste.

Hazard Communication Standard - is also known as "the worker right-to-know" program and is required by 29 CFR 1910.1200.

Hazardous Chemical (HC) - a substance regulated by the OSHA Hazard Communication Standard in 29 CFR 1910.1200.

Hazardous Material (HM) - means a substance or material which has been designated by the DOT as being capable of posing an unreasonable risk to health, safety and property when transported in commerce. The term includes hazardous substances, hazardous wastes, marine

pollutants and elevated temperature materials.

Hazardous Material Regulations (HMR) - regulations promulgated by the Department of Transportation to affect the safe shipment and transport of hazardous materials. HMR are found in 49 CFR Parts 171-180.

Hazardous Material Table (HMT) - an alphabetical listing of hazardous materials regulated in transport by the Department of Transportation found in 49 CFR 172.101.

Hazardous Substance (HS) - any material listed in 40 CFR 302.4.

Hazardous Waste (HW) - a solid waste which (1) is not excluded by 40 CFR 261.4(b) and (2) it meets the characteristic of a hazardous waste in Subpart C or (3) is listed in Subpart D of 40 CFR 261 or, is a mixture of a solid waste and a hazardous waste.

Land Disposal Notice - a certification signed by the generator that a hazardous waste either needs further treatment or has been treated to meet EPA standards for land disposal.

Lead-Based Paint - Lead-Based paint, as defined by the EPA in 40 CFR 745.103 (2) - paint or other surface coatings that contain lead equal to or in excess of 1.0 milligram per square centimeter or 0.5 percent by weight. It was manufactured prior to 1978.

Life Cycle Assessment - the comprehensive examination of a product's environmental and economic aspects and potential impacts throughout its lifetime, including raw material extraction, transportation, manufacturing, use and disposal.

Life Cycle Cost - the amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs and disposal costs discounted over the lifetime of the product.

Limited Quantities - the maximum amounts of a hazardous material for which there is a specific labeling or packaging exception.

Listed Waste - a hazardous waste that meets the listing in Subpart D of 40 CFR 261. These wastes are identified with the alphabetical letters "F", "K", "U" or "P".

Liquified Petroleum Gas - Any material which is composed predominantly of any of the following hydrocarbons, or mixtures of them: propane, propylene, butane (normal butane or isobutane), and butylene, made liquid by pressure.

Lower Explosive Limit - the minimum concentration of a vapor or gas in air below which it is not possible to ignite the vapors with a proper ignition source.

Manifest - a shipping document originated by the generator of a hazardous waste in accord with the requirements in 40 CFR 262.



Mitigation System - Any system or steps designed to reduce radon concentrations in the indoor air of a building.

Non-Bulk Packaging - a packaging which has a maximum capacity of 450 L (119-gal.) or less as a receptacle for a liquid; a maximum net mass of 400 kg (882-pounds) or less and a maximum capacity of 450 L (119-gal.) or less as a receptacle for a solid; or a water capacity of 454 kg (1,000 lbs.) or less as a receptacle for a gas.

Occupied Building - A building occupied more than 4 hours per day.

Operating Unit - includes the National Centers for Environmental Prediction (NCEP), National Data Buoy Center (NDBC), NWS Training Center (NWSTC), National Reconditioning Center (NRC), National Logistics Support Center (NLSC), Radar Operations Center (ROC) or the Sterling Field Support Center (SFSC).

ORM-D - a material other than a regulated quantity which presents a limited hazard during transportation due to its form, quantity and packaging.

pH - a measure of the acidity or alkalinity of an aqueous (water) solution. If less than 7.0, the solution is acidic. If greater than 7.0, the solution is alkaline or basic.

Phase I Property Investigation - the study of a piece of property to determine the potential that it might be contaminated.

Picocuries - A unit of measurement used to describe certain types of nuclear radiation. A curie is the amount of any radionuclide that undergoes exactly  $3.7 \times 10^{10}$  radioactive disintegrations per second. A picocurie is one trillionth ( $10^{-12}$ ) of a curie, or 0.037 radioactive disintegrations per second.

Picocurie per liter (pCi/L) - A common unit of measurement of the concentration of radioactivity in a fluid (liquid or gas). A picocurie per liter corresponds to 0.037 radioactive disintegrations per second in every liter of fluid.

Pollution Prevention - a continual process to use materials, processes or practices that reduce or eliminate the creation of pollutants or waste at the source. It includes practices that reduce the use of hazardous materials, energy, water or other resources and practices that protect natural resources through conservation or more efficient use.

POTW - Publicly-Owned Treatment Works otherwise known as a sewage treatment plant.

Qualified Person - A person qualified by education, training and experience to estimate employee exposures to hazardous materials and work conditions.

Radon - A colorless, odorless, radioactive gas formed by the decay of radium. Radon exists in

soils, rocks and some groundwater supplies. It can infiltrate into buildings.

Recovered Materials Advisory Notice (RMAN) - Periodically updated purchasing guidelines issued by the EPA. RMANs recommend recycled-content levels and/or ranges to look for when purchasing products and materials.

Recyclables - Solid wastes which can be treated or processed to allow direct reuse or introduction into new products.

Release - any spilling, leaking, pumping, pouring, emitting, emptying, discharging, ingesting, escaping, leaching, dumping or disposing into the environment as defined in 40 CFR Part 302.4.

Reportable Quantity (RQ) - the amount of a hazardous substance as set forth in 40 CFR 302.4, which when released into the environment within any 24-hour period, requires an immediate report to the National Response Center - AND/OR - the amount of an extremely hazardous substance as established in 40 CFR 355, which when released off-site, requires an immediate report to the Community Emergency Coordinator for the Local Emergency Planning Committee (LEPC).

Small Quantity Generator (SQG) - produces more than 100 kilograms (220-pounds) but less than 1,000 kilograms of waste per month.

Solid Waste - A term used to describe garbage. The EPA defines it as any discarded material that is not excluded from regulation by 40 CFR 261.4(a) or that is not excluded by a variance granted in 40 CFR 260.30 and 260.31.

Specific Gravity - is the weight of a solid or liquid as compared to the weight of an equal volume of water.

Spill Prevention Control and Countermeasures (SPCC) Plan - a formal plan prepared by a Professional Engineer which describes the procedures and equipment needed to prevent a release from a storage tank or area as well as the procedures to be used should a release occur.

Station Manager - For the purpose of this procedure, the Station Manager shall be either the NWS Regional Director; Directors of Centers under NCEP (Aviation Weather Center, NP6; Storm Prediction Center, NP7; and Tropical Prediction Center, NP8), Directors of the NDBC, NWSTC, and Chiefs of NRC and ROC; or Meteorologist-in-Charge (MIC), Hydrologist-in-Charge (HIC) or Official-in-Charge (OIC).

Threshold Limit Value (TLV) - published by the American Conference of Governmental Industrial Hygienists (ACGIH) which represents conditions under which it is believed that nearly all workers may be repeatedly exposed to day after day without adverse health effects.

Threshold Planning Quantity (TPQ) - the quantity of an extremely hazardous substance as listed in 40 CFR 355 that, if stored at any time at a facility, requires the facility to comply with the

EPCRA reporting requirements.

Tier II Form - provides information about a specific hazardous material stored at a site. Tier II form is required under Section 312 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). The purpose of this form is to provide State and local officials and the public with information on the general hazard types and locations of hazardous chemicals present at your facility during the previous calendar year.

Underground Storage Tank (UST) - a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground that stores petroleum or any hazardous substance listed in 40 CFR 302.4.

Universal Wastes - hazardous wastes that are subject to significantly reduced regulatory requirements if recycled (40 CFR Part 273). These wastes include batteries, fluorescent bulbs, mercury-containing thermostats and pesticides.

Upper Explosive Limit - the maximum concentration of vapors or gas in the air above which it is not possible to cause ignition of the vapors with a proper ignition source.

Xeriscaping - landscaping technique which minimizes the use of water.

## 5. Manual Organization

Each section of the manual consists of a table of contents, one-page summary (synopsis), a checklist, the full text of the program requirements and copies and/or sources of the references. The summary highlights the most important aspects of the program and may be used by Station Managers as an overview for program implementation. The checklist should be used initially to determine facility/work site compliance with the requirements of the section then at least annually or, as needed, to ensure for compliance.

There is a special note concerning these checklists. Each question on the checklist has three possible answers - YES, NO or NOT APPLICABLE (NA). Typically, three underlined spaces have been provided for the answer. For some questions, the underlined space has been replaced by an empty rectangle or “box.” These boxes indicate that special action is required. If the answer is placed in a box, the NWS Regional Environmental/Safety Coordinator or the NWS Headquarters Environmental and Safety staff must be contacted as soon as possible. The manual also includes a glossary which contains the definitions for keywords used in the manual and a list of acronyms used in the text.

## 6. NOAA Titles

In NOAA Administrative Order (NAO) 216-17, NOAA Environmental Compliance Program uses certain terms to define personnel who have roles in environmental compliance matters. However, the same terms are not used by each Line Office within NOAA. There are two terms which have a direct application to NWS personnel:

### a. Designated Responsible Official

The Designated Responsible Official (DRO) at every NOAA facility is the senior NOAA official on-site. This official has authority over operations or activities which are subject to environmental statutes. The responsibility of the DROs is inherent in their position and need not be formally designated or ascribed. For the NWS, the DRO could be: the Assistant Administrator (AA), the Deputy Assistant Administration (DAA), the Regional/Center/Office Director, the Meteorologist-in-Charge (MIC), Hydrologist-in-Charge (HIC) or Official-in-Charge (OIC).

According to NOAA, the DRO is assigned the following duties and responsibilities:

- 1) Ensuring that facility operations and activities are conducted in compliance with environmental and occupational safety/health requirements.
- 2) Ensure that all areas and operations of each workplace, including office operations, under the DRO jurisdiction, are locally inspected (i.e., assessed, surveyed, audit, etc.) at least annually.
- 3) Ensuring that all environmental and occupational safety/health assessment or survey findings are corrected within the recommended abatement period.
- 4) Ensuring that on-site personnel are aware of environmental and occupational safety/health requirements and are properly trained and equipped.

- 5) Elevating environmental and/or occupational safety/health compliance issues to senior management with recommendations for resolution as necessary to ensure compliance.

b. Facility Environmental Coordinator

The Facility Environmental Coordinator (FEC) is responsible for ensuring the activities carried out at a facility are conducted in accordance with Federal, state and local environmental regulations. For the NWS, the FEC is identified as the Environmental Focal Point. While at some NOAA facilities the FEC will also be responsible for compliance with occupational safety and health requirements, this role can be assigned to another employee.

## 7. References

A list of specific references to regulations, standards and guidelines used to implement the program is included at the end of each section. The following websites can be used to reference Federal regulatory citations referenced throughout this document.

These websites can be used for reference to any Title within the Code of Federal Regulations (CFR).

- <http://www.access.gpo.gov>
- <http://www.firstgov.gov>

Specific reference to the Environmental Protection Agency (EPA) regulations and program information:

- <http://www.epa.gov> (click on “Laws, Regulations and Dockets” on left side of page).

Specific Web sites for the Department of Transportation (DOT) regulations and information:

- <http://www.dot.gov>

In addition, *Appendix A* to this manual provides a summary of the laws that created the national environmental program as well as a cross reference to the regulations promulgated as a result of these laws.

*Appendix B* is a combination of the list of chemicals identified by the EPA as “hazardous substances” (HS) and their reportable quantities as published in 40 CFR 302.4 and the list of chemicals identified as “extremely hazardous substances” (EHS) and their threshold planning quantities as published in 40 CFR 355.

*Appendix C* is a listing of the State Environmental Agencies web sites.

*Appendix D-1 and Appendix D-2* include a hazardous waste Labeling/Marking Microsoft Word freeware and instructions for its use.